



When Santa Fe was founded in 1607, official records shown an inn or fonda was among the first businesses established. When Captain William Becknell completed the first sucessful trading expedition from Missouri to Santa Fe-a route that came to be known as the Santa Fe Trail-he enjoyed the hospitality at the inn (la fonda), where the Santa Fe Trail terminated at the town's central Plaza.



The current La Fonda was built in 1922 on the site of the previous inns. Over the years, La Fonda has continued the same tradition of providing warm hospitality, excellent service, and modern amenities while maintaining historic integrity and architectural authenticity.



The La Fonda Hotel today.

9th Workshop on RF Superconductivity



La Fonda Hotel Santa Fe, New Mexico USA November 1–5, 1999

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Main Topics

- Operational experience with superconducting accelerators
- **** Superconducting RF Laboratory review talks
- The quest for high gradients
- **** High-intensity proton linac applications
- **** Cavity fabrication and manufacturing
- **** High-power and HOM couplers and windows
- Future applications of RF superconductivity

Important Dates/Deadlines

September 15 Abstract submission

Early registration* Tour registration Hotel reservation*

Companion program registration

October 10 Rental car reservations
November 1 Paper submission

November 1–5 Workshop

^{*}Please make your reservations by September 15 to qualify for the Workshop rate of \$495 and to guarantee a room at the Workshop hotel.

Overview

Introduction

Particle accelerators have evolved from being specialized instruments of nuclear and particle physics, to being the tools of choice for fields as diverse as ion implantation, high-energy particle physics, surface analysis, medical treatments, waste sterilization, airport security, food preservation, spallation neutron physics, and coherent light research. During the past 60 years, the technology of designing and building these machines has matured significantly.

The desire to achieve higher performance in particle accelerators at lower cost is widespread. In the early 1970s, the first tests using superconducting niobium cavities were performed with the intent of taking advantage of the extremely low surface resistance of superconducting material, which would lead to high-efficiency, high-gradient accelerators. These tests heralded the beginnings of radio-frequency (RF) superconductivity as an accelerator technology in its own right.

Since then, scientists around the world have applied this technology in accelerator applications to make higher performance particle accelerators, and to better understand the limiting mechanisms in superconducting cavities. In 1980, a workshop on RF superconductivity was held at Karlsruhe to bring together the contributors in the field. This was the first workshop, and now, workshops are held every other year.

Technical Program

The field of RF superconductivity has grown steadily since that first workshop. The 9th Workshop on RF Superconductivity will bring together over 200 contributors active in this field, from dozens of laboratories and industries around the world. The Workshop will cover the status of and advances in RF superconductivity; technical review talks in field emission in niobium cavities, fabrication, cleaning, and surface preparation; RF power delivery; and future applications of superconducting technology. English will be the official language for the Workshop.

The diversity of topics, combined with the unique charm of autumn in Santa Fe at the historic La Fonda Hotel, promise to make this an informative, interesting, and enjoyable meeting.

Location

Santa Fe is the capital of New Mexico and is located in the foothills of the Sangre de Cristo Mountains, 7,000 feet above sea level. Its Rocky Mountain climate and geography, combined with the cultural diversity of New Mexico, make Santa Fe an ideal location for a memorable workshop.

The La Fonda Hotel is located on the southeast corner of Santa Fe's renowned Plaza with its shops, galleries, restaurants, historical sights, and museums. Known for its award-winning Spanish pueblo-style architecture, La Fonda is a landmark filled with unique paintings and colorful, hand-painted, and hand-carved wooden furniture, beams, corbels, and much more.

A map of Santa Fe, showing the location of La Fonda, is located in the inside back cover of this announcement.

Daily Schedule

	Sunday October 31	Monday November 1	Tuesday November 2	Wednesday November 3	Thursday November 4	Friday November 5
8 a.m.		8:30–8:45 a.m. Welcome	8:30 a.m.–12 p.m. Quest for High	8:30–11:45 a.m. "Hadronic" SC	8:30 a.m.–12:30 p.m. SC Technology	8:30 a.m.–12:15 p.m. "Leptonic" SC
9 a.m.		8:45 a.m.–12 p.m. Operating and Laboratory	Gradients	Futures		Futures
10 a.m.		Review				
11 a.m.						
12 a.m.		12–1:30 p.m. Lunch (on your own)	12–1:30 p.m. Lunch (on your own)	12–1:30 p.m. Lunch (on your own)	12:30–2 p.m. Lunch	12:15–12:30 p.m. Closing Remarks 12:30–1:30 p.m.
1 p.m.		1:30–6 p.m.	1:30–5:30 p.m.	1:30–5:30 p.m.	(on your own)	Lunch (on your own) 1:30–6 p.m.
2 p.m.		Operating and Laboratory Review cont.	Poster Session I	Poster Session II	Guided Discussion	Laboratory Tour
3 p.m.					Groups	
4 p.m.						
5 p.m.	5–8 p.m. Registration and Reception					
6 p.m.	1			6–7 p.m. Reception		
7 p.m.				7–10 p.m. Banquet		

LANSCE Tour

On the final afternoon of the Workshop, a tour to the Los Alamos Neutron Science Center at Los Alamos National Laboratory will be available for Workshop participants. If you would like to join this tour, please indicate this on your *Registration Form*. If you are not a U.S. citizen, please complete the *Laboratory Tour Registration Form* and return it by **September 15, 1999**. **Los Alamos National Laboratory policy prohibits foreign-national site access if proper approvals are not obtained in time.**

Call for Papers

This is the formal call for papers for the 9th Workshop on RF Superconductivity. Authors are encouraged to submit papers describing work that is new, significant, and relevant to the field of RF superconductivity. Papers already published elsewhere will not be accepted. Any paper accepted for presentation, which is not presented at the Workshop, will be excluded from the proceedings. All contributed papers will be presented as posters; invited papers will be presented as oral presentations.

Abstracts

The submission of abstracts is encouraged. The abstract deadline is **September 15, 1999**.

Abstract Preparation Guidelines

Abstracts should be prepared according to the following instructions:

Size and Layout

- **** One continuous single-spaced paragraph
- One vertical space before footnotes, if any
- **** No graphics
- Width of printed area: 12.0 cm (4 3/4 in.)
- Height: variable up to 10.5 cm (4 1/8 in.)

Contents (listed in sequence)

- *** Title of Paper (first letter of each main word capitalized)
- **** Authors' names in capital letters
- **** Affiliations should be abbreviated, with capitalization as in title
- **** Text (body of abstract a maximum of 200 words)
- One blank vertical space (if there are footnotes)
- Indicate references to title or authors with "*", "**", etc.
- Indicate footnotes to text with [1], [2], etc.
- Include a few key words

Important

- The Do not use Greek symbols, superscripts, or subscripts.
- Include the name and e-mail address(es) of the "corresponding author(s)" with your submission because the "corresponding author(s)" will receive all correspondence related to the submission from the RFSC99 organizers.

Abstract Submission Guidelines

The preferred method for submitting abstracts is electronically. Please use one of the following methods:

Web Submission

- Complete the *Abstract Submission Form* available on the Workshop Web site at http://mesa53.lanl.gov/rfsc99/submission.html
- Follow the instructions on the Web and the Abstract Preparation Guidelines above.

E-mail or Mail Submission

Follow the Abstract Preparation Guidelines above.

Submit your abstract(s) in the form of ASCII text file(s) (no LaTeX, MS Word, PDF, or Postscript will be accepted) by e-mail, attached to e-mail, or mail a diskette for use on a Macintosh (preferred) or a PC workstation to

Lorraine Stanford MS H845 Los Alamos National Laboratory Los Alamos, NM 87545 USA Phone: 505-667-5051

Fax: 505-667-9409 E-mail: rfsc99@lanl.gov

Abstracts received as hard copy only will be accepted, but are discouraged. Authors with no means of electronic submission should contact Lorraine Stanford for instructions.

The abstracts will be available electronically on the Web before the Workshop and in the printed program at the Workshop.

Authors will be informed of their "paper identification number" after the abstract submission. This number is needed for the paper submission procedure.

Papers

Paper Preparation Guidelines

Authors must follow template instructions that are available on the Workshop Web site at http://mesa53.lanl.gov/rfsc99/.

Paper Submission Guidelines

Papers should be submitted on the Web. The paper deadline is **November 1, 1999**. In addition, photo-ready hardcopies of the paper along with a completed *Copyright Form* need to be submitted at the beginning of the Workshop. Detailed instructions for paper submission and the *Copyright Form* are available on the Workshop Web site at http://mesa53.lanl.gov/rfsc99/.

The electronic paper submittal process will do the following:

- Allow you to review the Abstract Data, Author's List, Title, etc., and email changes if required
- FTP or upload your files (paper Postscript file, MS Word files, and eps (figures) files)
- Convert the Postscript file to a PDF file
- Review the PDF file for accuracy
- Confirm paper submission to RFSC99

Authors with no means of electronic submission should contact Lorraine Stanford for instructions.

Presentations

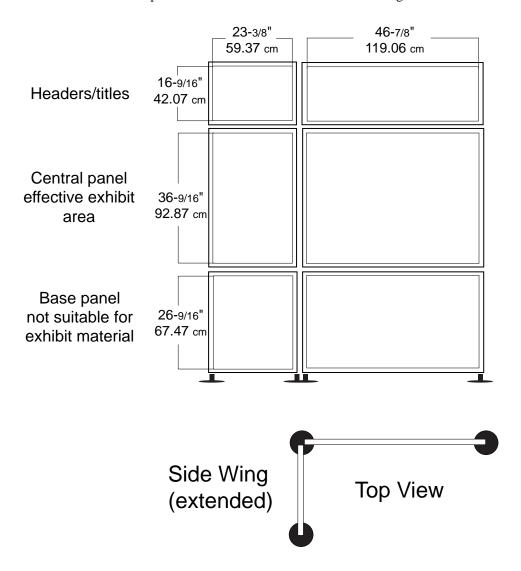
Contributed Posters

The poster session has traditionally been an excellent opportunity for direct communication among Workshop participants. To promote the direct exchange of ideas, poster sessions will be held the afternoons of Tuesday, November 2, and Wednesday, November 3.

Display Boards

Posters should be mounted using Velcro®, which will be provided, during the lunch break and be ready for the start of the poster sessions. (Note: Tacks or tape will not work on the display boards.) The posters should be removed immediately following the conclusion of the poster sessions.

The display board available for each poster contribution will have the following dimensions:



Invited Speakers

Oral presentations will be made by speakers from a variety of institutions on topics ranging from laboratory reviews to specific areas of research and development. Speakers will be invited by the Workshop Program Committee.

Audio-Visual Equipment

Two overhead projectors, one VCR (NTSC norm), and laser and stick pointers will be available for oral presentations. Please contact Lorraine Stanford (505-667-5051 or rfsc99@lanl.gov) if you need special equipment.

Proceedings

All accepted papers (invited and contributed) will be published in the Workshop proceedings. The proceedings will be published 6 months after the Workshop and mailed free of charge to Workshop participants as both traditional hard-copy volumes and a CD-ROM version. Each registrant will receive the proceedings at the address submitted on the *Registration Form*.

Registration

To establish your participation at the RFSC 99 Workshop, please complete the enclosed *Registration Form* and submit it along with the appropriate fee in U.S. dollars to the Los Alamos Neutron Science Center Office by **September 15, 1999.** We can accommodate cheques payable to RFSC 99 and credit cards (Visa or MasterCard only). The registration fee includes general meeting expenses, refreshments, banquet, and the Workshop proceedings.

Registration fee before September 15	\$495
Registration fee after September 15	\$530

Advance registration is strongly recommended. Registration will be increased to \$530 after September 15. Only credit cards and cheques in U.S. dollars will be accepted during on-site registration. Please arrive early if you need to register on-site.

Registration Desk Hours

The registration desk will be set up in the lobby of La Fonda Hotel. The registration desk will be open:

Sunday	October 31	5 p.m.–8 p.m.
Monday	November 1	7 a.m.–6 p.m.
Tuesday	November 2	7 a.m.–5 p.m.
Wednesday	November 3	7:30 a.m5 p.m.
Thursday	November 4	7:30 a.m.–5 p.m.
Friday	November 5	7:30 a.m.–5 p.m.

Accommodations

The RFSC99 Workshop will be held in the La Fonda Hotel in Santa Fe, New Mexico. Rooms at the La Fonda have been set aside for Workshop attendees. If you make your hotel reservations before **September 15, 1999**, a special rate of \$85/single and \$100/double (plus tax) is being offered for the nights of October 30 and 31 and \$78.00/single and 98.00/double (plus tax) for the nights of November 1 to 5. These rooms are available on a first-come first-served basis.

To guarantee your La Fonda Hotel accommodations at these special rates, please complete the *La Fonda Hotel Registration Form* and fax it (505-995-2324) directly to La Fonda or call (505-982-5511 or 1-800-523-5002 and select "1") by **September 15, 1999**. Please refer to the RF99 Workshop and provide La Fonda with your credit card information. Reservations made after September 15 will be accepted by the hotel on a space-available basis.

Santa Fe has a wide variety of accommodations and lodging for visitors. If you choose not to stay at La Fonda, check the Workshop Web site at http://mesa53.lanl.gov/rfsc99/general.html for additional hotels. Please make reservations directly with the hotel of your choice.

Transportation

Albuquerque Sunport is the only major airport near Santa Fe. United Airlines has turboprop express service from Denver to the smaller airport of Santa Fe, however, the Santa Fe Airport cannot accommodate commercial jet liners.

Santa Fe is approximately a 1-hour drive from Albuquerque. You may either rent a car or take a shuttle bus between Albuquerque Sunport and Santa Fe.

Rental cars have been set aside at the Albuquerque Sunport by Budget Rent a Car for Workshop attendees. If you make your car reservations before **October 10, 1999**, you can get a special rate of \$199.00 (unlimited miles) for the week of October 30 to November 6, 1999, for a mid-sized car. These cars are available on a first-come first-served basis. To guarantee your Budget car at these special rates, please call Jesse Thompson (800-227-3678, ext. 3278) directly, refer to the RFSC99 Workshop, and provide Budget with your credit card information. You will receive a confirmation number from Budget.

Additional rental car agencies are represented at the airport. Maps from Albuquerque to Santa Fe are available from the rental car agencies and from the Workshop Web site at http://mesa53.lanl.gov/rfsc99/general.html.

Transportation to and from Santa Fe is also provided by several shuttle companies. Please call the shuttle companies directly for more information or to make reservations:

Herrera's Santa Fe Shuttle	888-833-2300
Grayline Express Shuttle	800-256-8991
Sandia Shuttle Express	505-474-5696

Hospitality

Registration and a no-host reception will be held Sunday, October 31, 1999, from 5 to 8 p.m. Refreshments will be provided during mid-morning and mid-afternoon breaks each day. On the evening of Wednesday, November 3, 1999, a hosted banquet at La Fonda Hotel will take place. Banquet tickets can be purchased for companions when you complete your *Registration Form*. The tickets will be included in your registration packets.

Companion Program

To register for the RFSC99 companion activities, complete the *Companion Program Registration Form* and send it to the address included on the form with your payment by **September 15, 1999**. (After October 15, 1999, there will be no refunds.) Companions should pick up their tickets and name tag at the Workshop registration desk. The Walking Tour and Cooking Class will leave promptly from the Workshop registration desk.

No-host Reception

Sunday, October 31, 5–8 p.m.

Companion Breakfast

Monday, November 1, 9-10:30 a.m.

Speakers will provide overviews on the history of La Fonda Hotel and Santa Fe.

Walking Tour

Monday, November 1, 11 a.m.-1:30 p.m.

U.S. \$10 per person

Santa Fe's original 2-1/2 hour walk is a leisurely stroll and a delightful introduction to the history and cultures of Santa Fe. The walk begins in the Plaza where 400 years of history surround you. You will explore the best of Santa Fe, meandering through narrow streets, and wandering down the old Santa Fe Trail. You'll visit important historic sites, including Sena Plaza and Barrio de Analco, see the San Miguel Mission (oldest church in the USA), St Francis Cathedral, and the State Capital complex. The guide is extremely knowledgeable and will share the stories and history of Santa Fe.

Cooking Class

Tuesday, November 2, 10 a.m.-mid-afternoon

U.S. \$50 per person

A cooking class will be arranged at a local Pueblo. Upon arrival, participants will prepare loaves of bread to be put in the horno (traditional beehive oven). While the bread bakes, the group will help make the rest of the meal, including posole, red chili, and green chili. The production and preparation of food is a key part of the pueblo Indian culture. The visit with a family in a contemporary village coupled with the preparation of traditional foods is a unique opportunity to meet and talk with Pueblo residents in an informal, relaxed home atmosphere. Lunch is included.

Reception and Banquet

Wednesday, November 3, 6–10 p.m.

U.S. \$40 per person

Banquet tickets can be purchased by the Workshop participant on his/her Registration Form.

Additional Considerations

Copy Center and E-Mail

Photocopying and e-mail services will be available.

Job Placement

A bulletin board will be available to post job opportunities.

Currency Exchange

All major credit cards are accepted in Santa Fe. Money can be exchanged at the Los Alamos National Bank branch in Santa Fe (1209 Galisteo Street) for a small service fee. Remember to bring your passport with you. Operating hours are

Monday-Thursday 9 a.m.-5 p.m. Friday 9 a.m.-6 p.m. Saturday 9 a.m.-12 p.m.

Geography and Climate

Many people who have not visited New Mexico might think of it as a barren place of deserts and cactus. While some of New Mexico is that way, Santa Fe, being in the North Central part of the state, is far from barren. At an elevation of 7,000 feet above sea level the altitude may take a little getting used to. The general rule of thumb is to allow about 24 hours to get adjusted.

Average temperatures in Santa Fe during early November range from a high of $50^{\circ}F$ ($10^{\circ}C$) during the day to a low of $27^{\circ}F$ ($-8^{\circ}C$) during the night.

Special Needs

Every effort will be made to accommodate dietary requirements and special needs of disabled participants. If assistance is required, please contact Lorraine Stanford at 505-667-5051 or rfsc99@lanl.gov.

Contact Information

For questions about the technical program, please call Brian Rusnak, Workshop Chairman, at 925-422-0435. For all other questions, please call Lorraine Stanford, Workshop Secretary, at 505-667-5051.

Questions can also be e-mailed to rfsc99@lanl.gov. The Workshop Web site may also be helpful — http://mesa53.lanl.gov/rfsc99/.

RFSC99 Workshop

Los Alamos Neutron Science Center c/o Lorraine Stanford MS H845 Los Alamos National Laboratory Los Alamos, NM 87545 USA

Phone: 505-667-5051 Fax: 505-667-9409 E-mail: rfsc99@lanl.gov

WWW: http://mesa53.lanl.gov/rfsc99/



Directions

From St. Fancis Exit: Stay on St. Francis Dr. and take a right onto Alameda St. Take a left onto Old Santa Fe Trail, and La Fonda Hotel will be on your right.

From Old Pecos Trail Exit: Stay on Old Pecos Trail, which becomes Old Santa Fe Trail. At the end of Old Santa Fe Trail, the La Fonda Hotel will be on your right.

